

# MEETING WATER DEMANDS IN SOUTHERN NEVADA

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# SOUTHERN NEVADA WATER AUTHORITY

- 7 water and wastewater agencies
- Includes 4 cities and unincorporated county
- Coordinates resource management at regional level





**74%** of state's population



**71%** of state's economic output

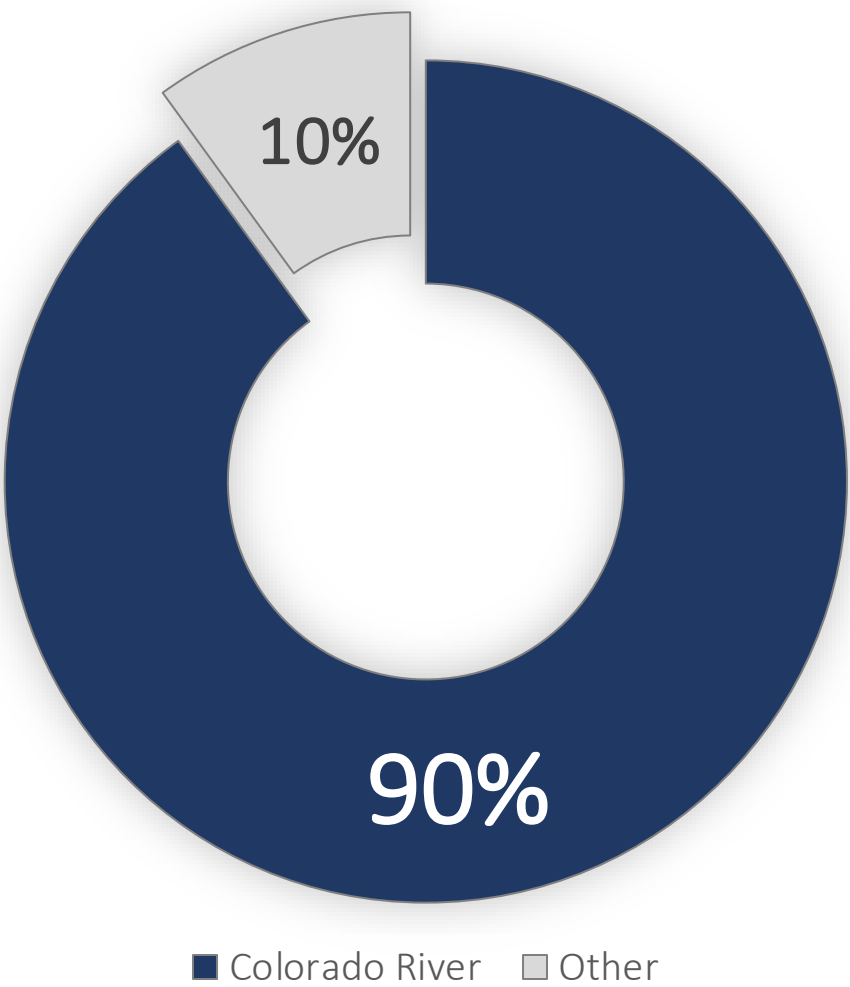


**Less than 5%** of water available for use in Nevada

Rev. 4/19

# WATER RESOURCES

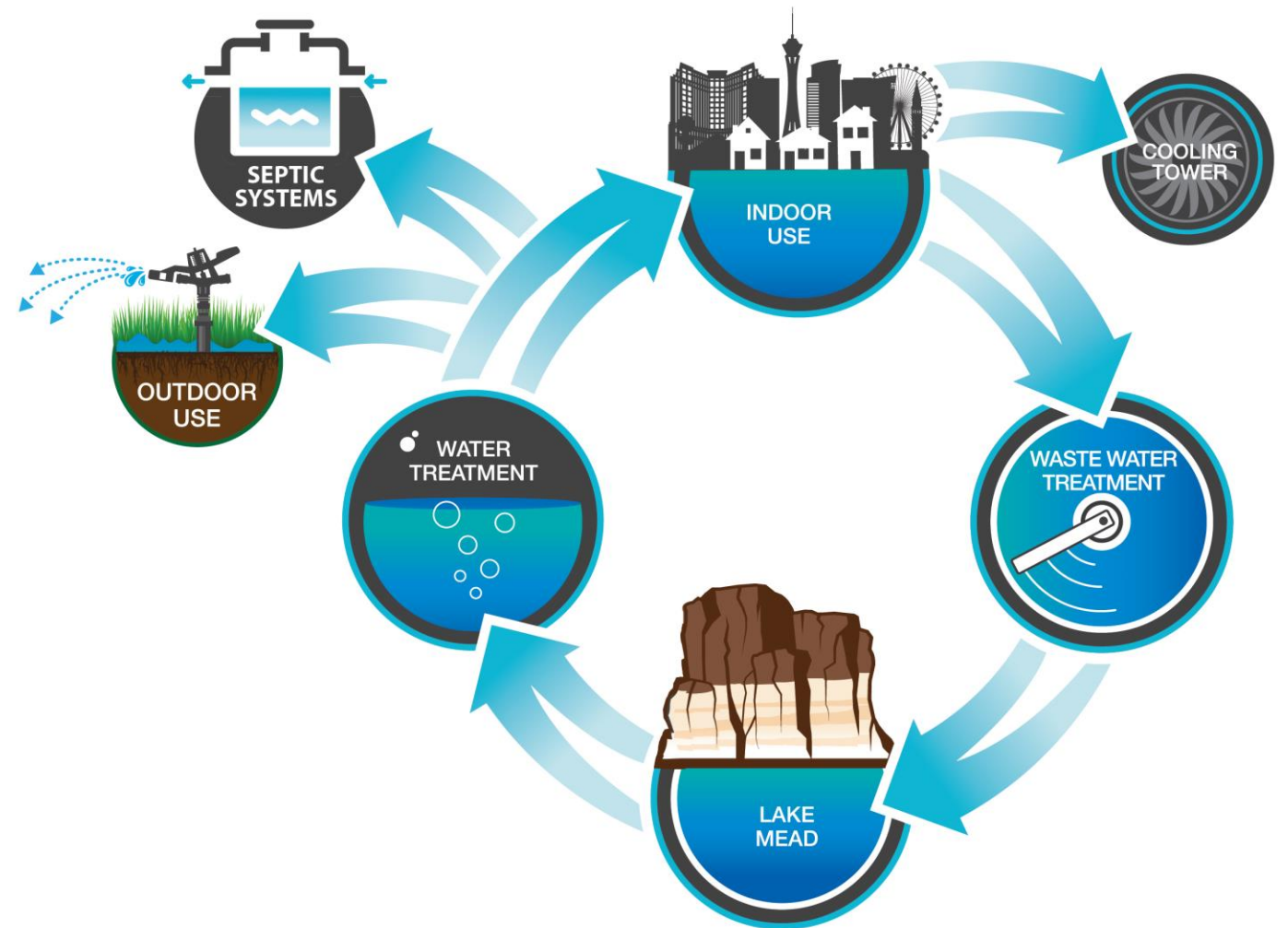
**Southern Nevada is nearly fully  
reliant on the Colorado River to  
meet the community's water  
demands.**





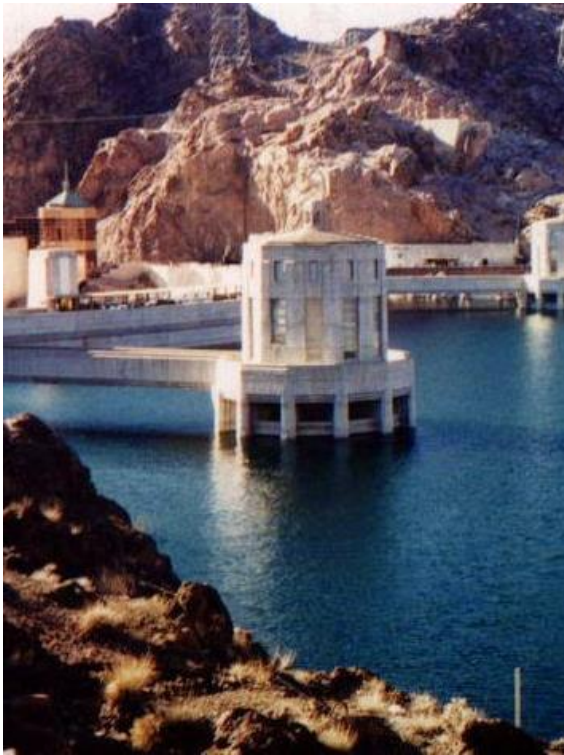
# RETURN FLOWS

Southern Nevada recycles 99% of water used indoors, thereby extending the availability of its resources.



## Drought conditions have significantly depleted Lake Mead's storage

1999



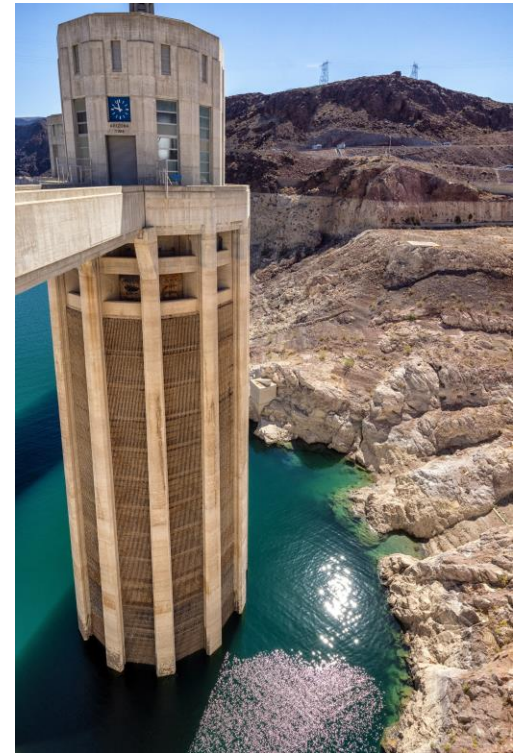
95%

2004



46%

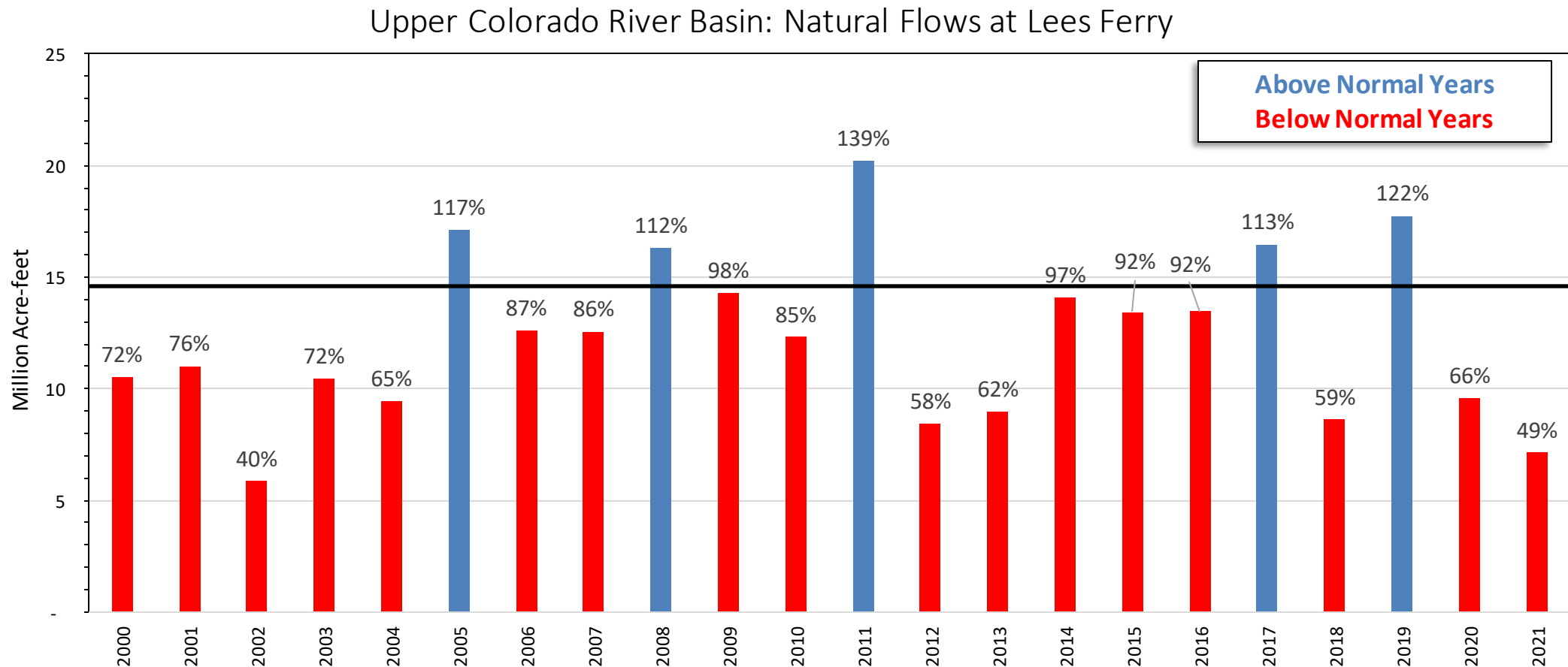
2022




30%

# DROUGHT

Since the early 2000s, the Colorado River has experienced significantly decreased inflows.







## **Drought response required four major activities for the SNWA:**

- **Reducing demands/water conservation**
- **Colorado River negotiations**
- **Securing alternate supplies**
- **Addressing infrastructure needs**



# REDUCING DEMANDS

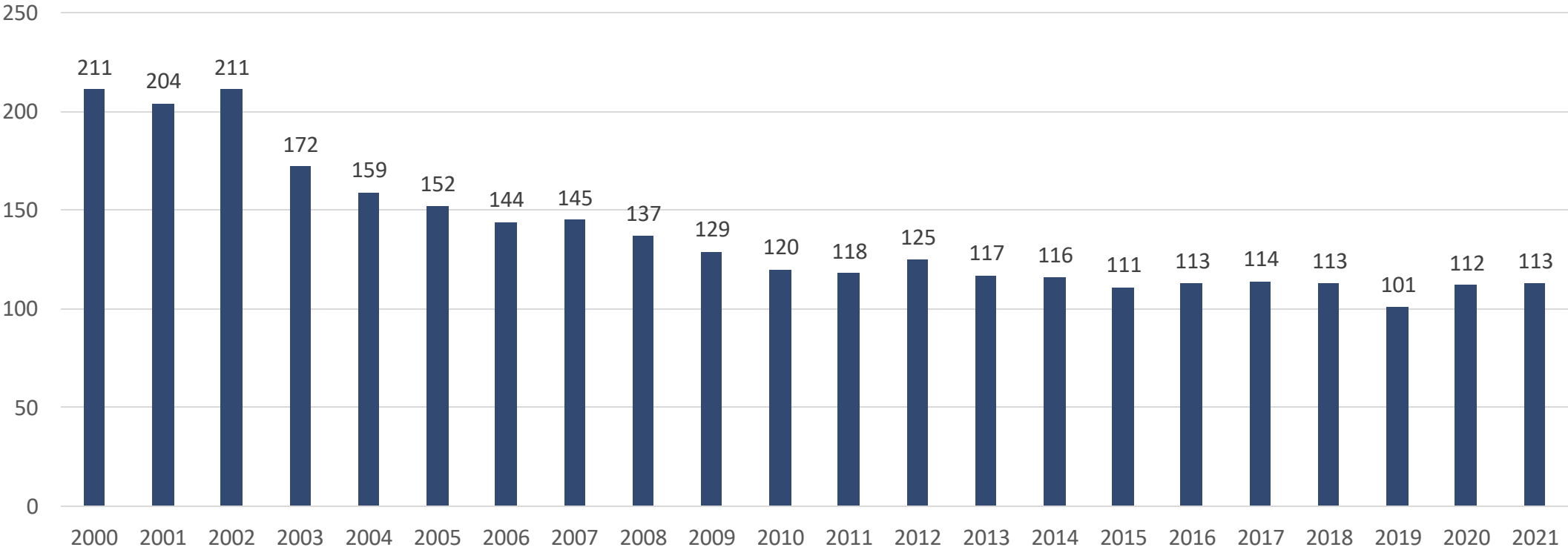
Community participation and innovation have been key to our success.

- Landscape development codes
- Golf course water budgets
- Mandatory watering schedules
- Water waste enforcement
- Tiered water rates
- Incentive programs





# SNWA GALLONS PER CAPITA PER DAY





**Southern Nevada has made progress since 2002,  
but considerable work remains.**

Southern Nevada  
**POPULATION**



Per Capita  
**WATER USE**



Colorado River Water  
**CONSUMPTION**



# REGULATIONS



- No turf in new homes
- No turf in new commercial properties
- Golf course water budgets
- Mandatory watering restrictions
- Water-waste prohibition
- Limits on manmade ornamental water features



# INCENTIVES

The Water Smart Landscapes program pays residents and businesses to convert grass to more water-efficient plants and trees.



# INCENTIVES

## WET PROGRAM

- Incentives for commercial & multifamily property owners who install water-efficient devices/technology
- Earn up to \$45 for every 1,000 gallons saved
- Replace water fixtures or find a custom option



**Unilever (Breyers Ice Cream Manufacturing Plant)** installed a controller to improve the number of times the water is used in the cooling tower.

Annual Water Savings: 42 million gallons



**Dona Maria Tamales** is a popular Mexican restaurant, with two locations in Southern Nevada. They upgraded their old water-cooled ice machines for air-cooled ice machines.

Annual Water Savings: 681,000 gallons



**Brady** services one million pounds of laundry each day for area hotels. Brady installed water efficient tunnel washing machines.

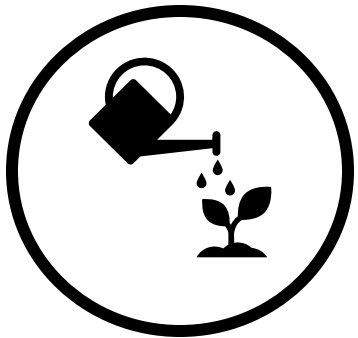
Annual Water Savings: 48 million gallons



# CONSERVATION GOAL

Approved in December, a new Water Resource Plan introduces initiatives that, when implemented, will help meet a new Conservation Goal of 86 gallons per capita per day (GPCD).

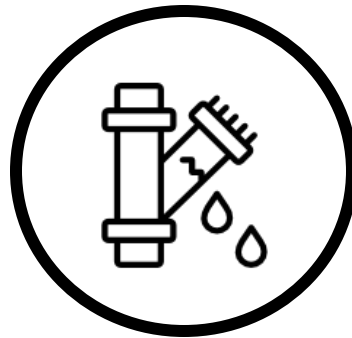
These efforts focus on reducing consumptive use:



**Landscape  
Efficiency**



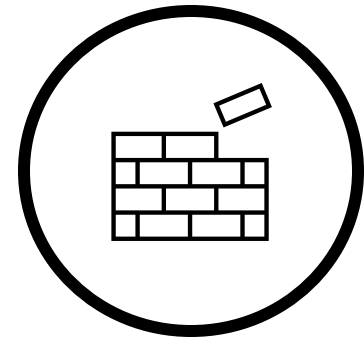
**Cooling  
Efficiency**



**Water Loss  
Control**



**Irrigation  
Compliance**



**New Development  
Efficiency**

# REDUCING CONSUMPTIVE USE

## Programs/Policies Underway

- Existing conservation programs
- Converting cool season turf
- Enhance leak resolution (AMI)
- Enhance watering schedule compliance
- Asset management investments
- No new golf courses\*
- Large water user policy\*
- AB 356 / Turf conversions\*
- Cooling efficiency standards (evaporative cooling)\*
- Limit new turf installations\*

*\*Indicates recently-approved initiative*

## Future Programs/Policies

- Reducing golf course water budgets
- Pool size regulations
- Park efficiency improvements (park water budgets)
- Implement pricing changes



# NON-FUNCTIONAL TURF

**A law passed by the Nevada Legislature (AB 356) in 2021 prohibits the community's water supplies from watering existing non-functional grass by 2027.**

*Single family residential homes excluded.*

## **Examples of non-functional turf:**

- Neighborhood entries
- Streetscapes
- Medians
- Roundabouts
- Non-residential applications (commercial buildings, office parks, etc.)

## **Non-functional turf is wasted water**

*(55 gallons per square foot lost each year)*



# NON-FUNCTIONAL TURF

- AB 356 also required the creation of the Nonfunctional Turf Removal Advisory Committee (NTRAC) to help develop plan for removal of nonfunctional turf
- **Nine individuals, representing a variety stakeholders:**
  - Homeowner associations
  - Commercial properties
  - Office parks
  - Multifamily properties
  - Golf courses
  - Municipalities
  - Environmental interests
- **Met in public meetings to develop recommended definitions, Functional and Non-Functional Turf, along with a waiver process and implementation efforts**





# NON-FUNCTIONAL TURF

- **The SNWA Board of Directors adopted the Implementation Plan and NTRAC's recommendations, including definitions for functional and nonfunctional turf, in January 2022**
- **For implementation, the adopted definitions and turf limitations must be put into code by SNWA's member agencies**

**SOUTHERN NEVADA WATER AUTHORITY**

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IMPLEMENTATION PLAN FOR  
THE REMOVAL OF  
NONFUNCTIONAL TURF IN  
SOUTHERN NEVADA

JANUARY 2022



 SOUTHERN NEVADA WATER AUTHORITY™



# GOLF COURSE WATER BUDGETS

- Initially, water budgets set at 6.5 acre-feet per irrigated acre (targeting top 10% golf course users); later reduced to 6.3 acre-feet per irrigated acre (top 20% of users)
- Between 2016-2020, Southern Nevada's golf courses used on average 4.16 acre-feet per irrigated acre
- Last month, the SNWA board approved a resolution to reduce water budgets to 4.0 acre-feet per irrigated acre



# EVAPORATIVE COOLING MORATORIUM

**Behind irrigation, evaporative cooling represents the largest consumptive water use.**

**An approved moratorium will limit cooling towers and water-cooled HVAC systems.**

**The SNWA recently authorized a study to be conducted by UNLV to compare water and energy use of evaporative systems to air-cooled systems.**





# LIMIT POOL SIZE

**Some area pools exceed 3,000 square feet and evaporate more than 145,000 gallons of water per year.**

**Reducing pool size will reduce wasteful development practices and reduce consumption due to evaporation.**





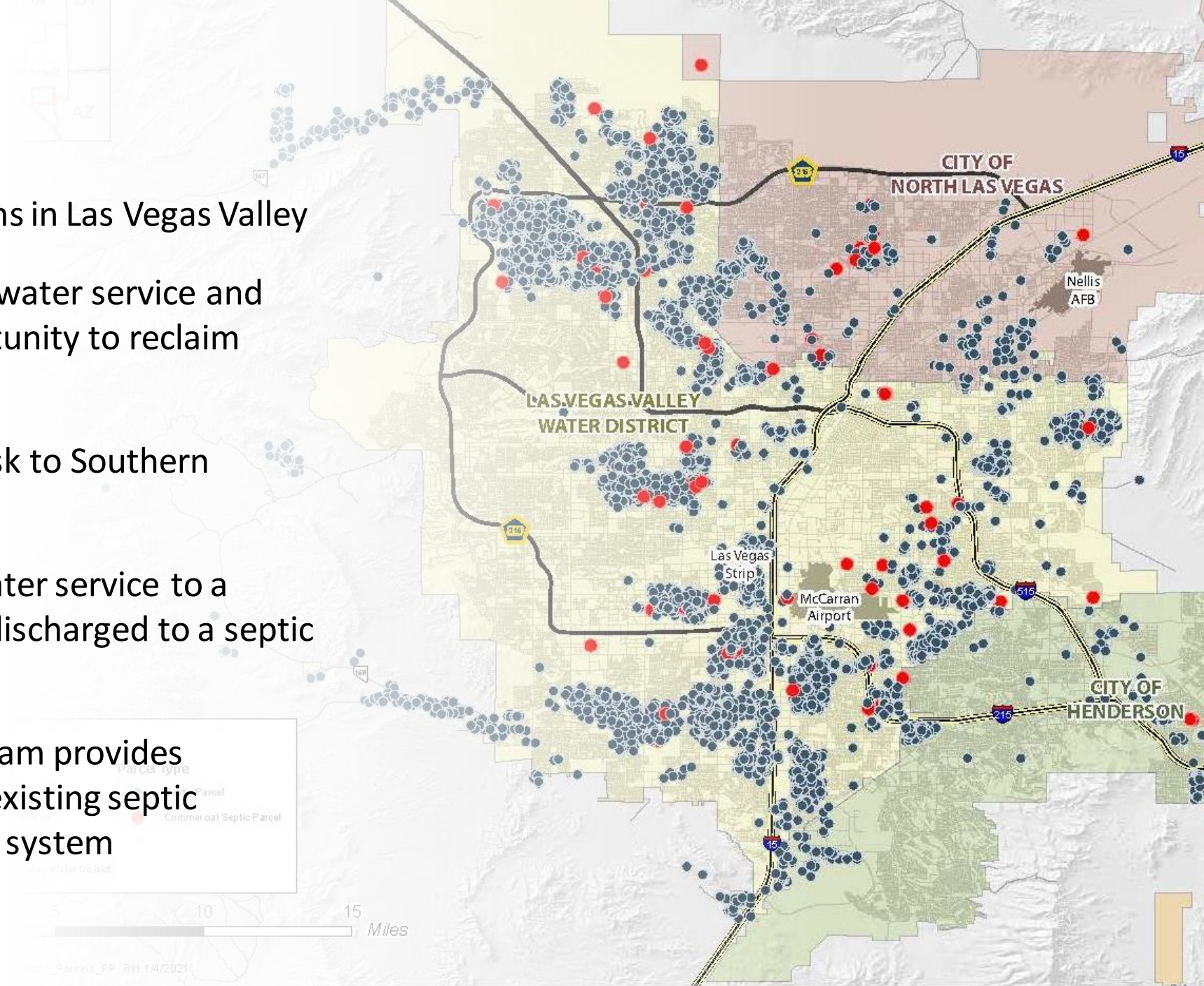
# LARGE WATER USER POLICY

**When implemented, a large water user policy will effectuate measures that reduce, mitigate or prohibit the consumptive use of the community's largest water users.**



# SEPTIC SYSTEMS

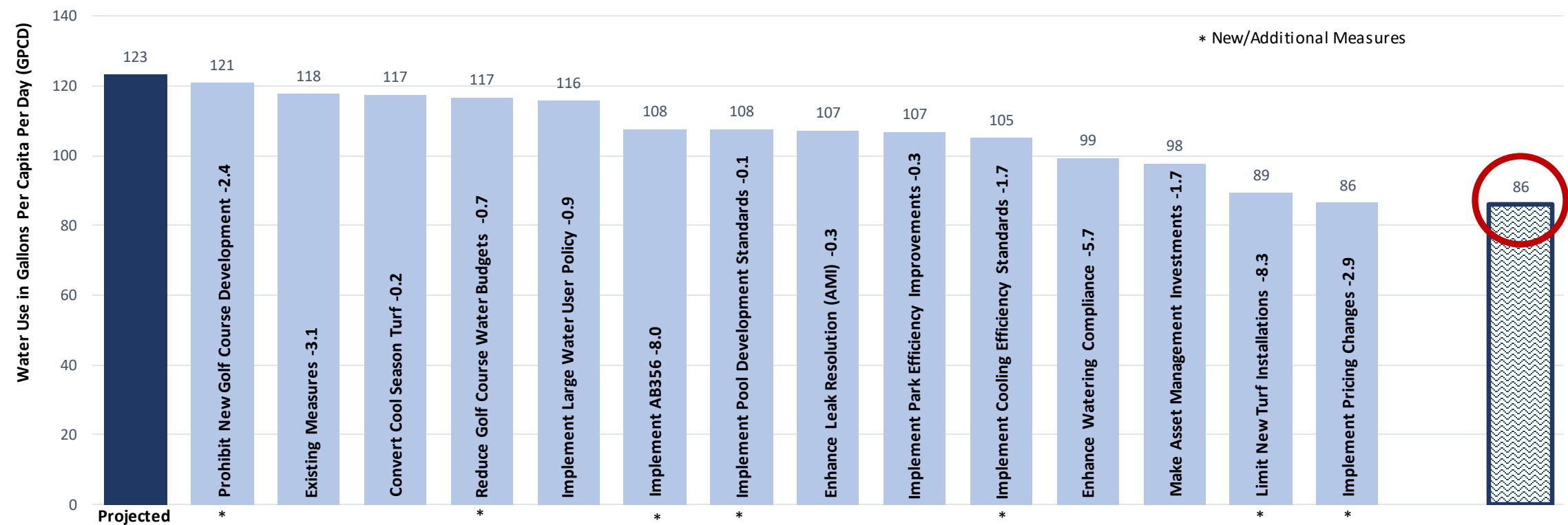
- More than 14,000 septic systems in Las Vegas Valley
- Properties that have municipal water service and septic systems eliminate opportunity to reclaim water through municipal sewer
- Septic systems pose a nitrate risk to Southern Nevada's groundwater aquifer
- LVVWD will not provide new water service to a property where wastewater is discharged to a septic system
- Septic System Conversion program provides financial assistance to convert existing septic systems to the municipal sewer system





# CONSERVATION GOAL

Achieving higher levels of efficiency will extend the availability of current resources and reduce the need for temporary and future resources.



It will also offset supply reductions associated with shortage and help to reduce upward pressure on demands associated with climate change.





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